

Inference in Historic Trail Research

Inference is a very important concept in all types of research from theoretical physics, to medicine, to historic trails. The skill of the researcher in understanding inference, properly applying it, and acknowledging its use, is of paramount importance. A researcher can never claim that the conclusions reached using inference are "absolute truth," and yet, this often happens in many fields of research.

“Evidence” > “Logic & Reasoning” > “Conclusions”

Conclusions reached by Inference are not Absolute Truth

The dictionary definition of inference is:

- a conclusion reached on the basis of evidence and reasoning.
- synonyms are: deduction, conclusion, reasoning, conjecture, speculation, a guess, presumption, assumption, supposition, reckoning, extrapolation.

Another dictionary definition for statistical inference is: "the theory, methods, and practice of forming judgments about the parameters of a population and the reliability of statistical relationships, typically on the basis of random sampling." The key term in all research inference is "**forming judgements**." It is the process of forming judgements that sometimes goes far astray in reporting research results. It is not uncommon for researchers to “create” unsubstantiated evidence (a.k.a., assumptions) to complete the “forming judgements” part of their work and their conclusions can be very misleading. It is incumbent on the researcher to avoid this behavior or, at least, to make it very clear what assumptions were made.

These definitions, however, do not give a full understanding of how inference is often applied. In historical research, the “evidence” is often sparse, or at best, fragmented, and no amount of “logic and reasoning” can make up for inadequate evidence. This results in “conclusions” that are often shaky, at best, or really wrong, at the worst.

Despite its importance, some researchers do not seem to fully understand the roll of inference in their research. For example, in medicine, we hear the term "statistical inference" which means to present research where the results are reported in terms of probability and statistics, and the reader is often left to make their own conclusions. This is not really “inference.” The conclusions reached by “statistical inference” are one step removed from actual inference and, thus, produce conclusions that are even more speculative, and possibly misguided.

In historical trail research, inference plays a big roll in trying to understand the history of the trail as well as trying to accurately determine its location on a map and documenting associated landmarks and campsites. This is especially true when original-source historical documentation is limited.

In my research, I acknowledge my use of inference to produce my results to the best of my ability, and do not claim to have produced "absolute truth."

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